

WHAT IS CLAIMED IS:

1. A wide band radio transmission method comprising the steps of:

(a) obtaining identification information on a video-related application which is executed in a user layer, from the user layer;

(b) obtaining information on at least one of channel characteristics and a decoding state from a physical layer; and

(c) deciding on a quality of service (QoS) level with reference to the identification information and the information on at least one of the channel characteristics and the decoding state from the physical layer.

2. The wide band radio transmission method according to claim 1, further comprising the step of (d) inserting an identifier field, which corresponds to the identification information, in a bit stream.

3. The wide band radio transmission method according to claim 1, further comprising the step of (e) inserting a quality of service (QoS) parameter field for indicating the QoS level of the video-related application, in a bit stream.

4. The wide band radio transmission method according to claim 2, further comprising the step of (e) inserting a quality of service (QoS) parameter field for indicating the QoS level of the video-related application, in the bit stream.

5. The wide band radio transmission method according to claim 4, after the step (e), further comprising the step of (f) outputting the bit stream in which the identifier field, the QoS parameter field, and payload data are inserted.

6. The wide band radio transmission method according to claim 5, wherein the step (f) comprises the steps of:

(f-1) checking whether the bit stream is byte-aligned;

(f-2) preparing stuffing bits when the bit stream is not byte-aligned;

5 and

(f-3) outputting the bit stream including the identifier field, the QoS parameter field, the payload data, and the stuffing bits.

7. The wide band radio transmission method according to claim 1, wherein the steps (a) and (b) are performed by a call setup process of performing radio transmission.

8. A wide band radio transmission method for transmitting bit streams of a video-related application through a radio channel, comprising the steps of:

(a) obtaining identification information on a video-related application  
5 which is executed in a user layer, from the user layer;

(b) deciding on a quality of service (QoS) level with reference to the identification information from the user layer and information on at least one of channel characteristics and a decoding state from a physical layer;

10 (c) inserting an identifier field, which corresponds to the identification information, in a bit stream;

(d) inserting a quality of service (QoS) parameter field for indicating the QoS level of the corresponding video-related application, in the bit stream;

15 (e) inserting payload data which is pure video data output from the video-related application, in the bit stream; and

(f) outputting the bit stream in which the identifier field, the QoS parameter field, and the payload data are inserted.

9. The wide band radio transmission method according to claim 8, wherein the step (f) comprises the steps of:

5 (f-1) checking whether the bit stream is byte-aligned;

(f-2) preparing stuffing bits when the bit stream is not byte-aligned;

and

(f-3) outputting the bit stream including the identifier field, the QoS parameter field, the payload data, and the stuffing bits.

10. The wide band radio transmission method according to claim 8, wherein the steps (a) and (b) are performed by a call setup process of performing radio transmission.

11. A computer readable medium for storing a program code for implementing a wide band radio transmission method for transmitting bit streams of a video-related application through a radio channel, wherein the program code comprises the steps of:

5 (a) obtaining identification information on a video-related application which is executed in a user layer, from the user layer;

(b) deciding on a quality of service (QoS) level with reference to the identification information from the user layer and information on at least one of channel characteristics and a decoding state from a physical layer;

10 (c) inserting an identifier field, which corresponds to the identification information, in a bit stream;

(d) inserting a quality of service (QoS) parameter field for indicating the QoS level of the corresponding video-related application, in the bit stream;

15 (e) inserting payload data which is pure video data output from the video-related application, in the bit stream; and

(f) outputting the bit stream in which the identifier field, the QoS parameter field, and the payload data are inserted.

12. The computer readable medium according to claim 11, wherein the step (f) comprises:

(f-1) checking whether the bit stream is byte-aligned;

(f-2) preparing stuffing bits when the bit stream is not byte-aligned;

5 and

(f-3) outputting the bit stream including the identifier field, the QoS parameter field, the payload data, and the stuffing bits.

13. A wide band radio transmission apparatus for transmitting bit streams of a video-related application through a radio channel, comprising layers of protocol, wherein the layers include:

a user layer for providing voice service, packet switching data (PSD) service, or circuit switching data (CSD) service, according to the type of the application, and for outputting identification information on a video-related application which is executed;

5 a link layer for performing link access control (LAC) and media access control (MAC) and for deciding on a quality of service (QoS) level with 10 reference to the identification information from the user layer and information on at least one of channel characteristics and a decoding state from a physical layer;

15 a bit stream reconfiguration layer for inserting an identifier field, which corresponds to the identification information, a quality of service (QoS) parameter field for indicating the QoS level of the corresponding video-related application, and payload data which is pure video data output from the video-related application, in a bit stream; and

20 a physical layer for performing bit streaming so that the payload data in which the identifier field and the QoS parameter field are inserted, is received through the bit stream reconfiguration layer and transmitted on a radio channel.

14. The wide band radio transmission apparatus according to claim 13, wherein the physical layer checks whether the bit stream input to the physical layer is byte-aligned and inserts stuffing bits for byte-aligning when the bit stream is not byte-aligned.

15. A wide band radio reception method for receiving bit streams of a video-related application through a radio channel, comprising the steps of:

receiving a bit stream in which an identifier field, a quality of service (QoS) parameter field, and payload data are inserted; and

5 performing a call setup negotiation with reference to the video-related application which corresponds to the identifier field and the quality of service (QoS) level of the video-related application which corresponds to the QoS parameter field.

16. A computer readable medium for storing a program code for implementing a wide band radio reception method for receiving bit streams of a video-related application through a radio channel, wherein the program code comprises the steps of:

5 receiving a bit stream in which an identifier field, a quality of service (QoS) parameter field, and payload data are inserted; and

performing a call setup negotiation with reference to the video-related application which corresponds to the identifier field and the quality of service (QoS) level of the video-related application which corresponds to the QoS parameter field.

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